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FCC
Washington, D.C.

RE: NPRM 02-98

June 20, 2002

Dear Sir or Madam:

I strongly support NPRM 02-98, however I would strongly suggest some changes be made. Since the NPRM addresses several bands I've segmented by comments by band.

COMMENTS IN SUPPORT OF PRIMARY STATUS ON 2.4 GHz

I am currently making use of this band at my repeater site for a microwave point to point relay link. I am using digital communications methodology and low cost commercially available equipment running low power and providing a TCP/IP link. As I am on the leading edge of Amateur technology in this area, I believe that this band is not only essential for the future of Amateur Radio, it is essential for our society to achieve the maximum benefit from Amateur Radio going forward.

Amateurs have already begun to build TCP/IP based network links for repeaters, and while this technology is in it's infancy, it will grow. Since repeaters currently surround our major metropolitan areas, the 2.4 Ghz ring of TCP/IP activity that this band would permit has the capability of providing a major disaster relief service based on 21st century standards.

For example, using this band, Amateurs can link repeaters seamlessly using digital technology. Backbones built on this band will have the capability of streaming video using digital techniques, and ultimately be able to communicate to any point in the world via internet gateways at speeds necessary to permit enhanced communication modes.

In an emergency, a portable station, with 2.4 Ghz digital uplink capability from a laptop using a light, inexpensive dish antenna, could relay information, pictures, and messages to authorities coordinating disaster relief. In this day, post 9/11, nothing could be more important or of more direct benefit to the citizens of the United States than to have this capability in the cadre of mitigation tools available post event.

Further, since most Amateurs are now familiar with computer networking in some form, and the larger clubs and groups have demonstrated an ability to deploy local networks at

a Field Day site, it is apparent that an uplink using 2.4 Ghz would permit wide scale relief efforts to be carried out reliably. It is essential that equipment for this band become widely owned by the Amateur Community, and this allocation will foster it.

SUGGESTIONS FOR PROCEDURAL CHANGES AT THE FCC RE: 2.4 GHz

I strongly suggest that the FCC modify it's certification for equipment operating in this band to require manufacturers to provide an option for easy operation in the Amateur Segment. This small step will ensure availability of equipment for this band segment, it will add to the biological safety of Amateurs who will not be attempting to modify equipment, promote the use of the band, and will have little or no cost to the manufacturer. Equipment modified for use in this segment could require a callsign and make automatic regular ID's consistent with current regulations.

COMMENTS IN SUPPORT OF 136 Khz ALLOCATION

While I support this allocation, and think it is long overdue, I believe that the suggested power limitations are far too stringent. I would suggest the following changes:

1. The band should be Extra Class only. Recent modifications to the licensing procedures have made the General Class license far too easily available to trust this class of Amateur to operate in such a small segment of the spectrum without causing interference. The Extra Class test currently provides the basis for this level of skill and commitment, and I caution the FCC (I am an active examiner) against opening this band to any other class of license.

2. The proposed power limits are generally far too small to be useful on this band, and the limitation of the specification will be hard to enforce, monitor, and properly ensure compliance even by Extra Class Amateurs wishing to experiment on this band. My believe is that this band will become a PSK31/CW band, however it is possible that technology beyond PSK31 is possible and could be developed here. Not much work has been done in this segment of the spectrum by Amateurs for many years, and the possibility of some new developments here is exciting. I fear that the power level suggested is so low however that it will be a prohibitive obstacle to those seriously involved in the use of the band. I would suggest that there be no ERP limit, and that power levels be limited to 100 watts using the current "minimum power required" regulations.

COMMENTS IN SUPPORT OF 5.25 to 5.45 Mhz

I support this allocation and strongly suggest that the band be segmented. I would suggest that a CW/Digital sub-band is a necessity. I also support the utilization of full legal power on this band, and license class segmentation.

Rather than utilize the current segmentation strategy, I also suggest that the Extra Class CW segment be placed at the high end of the CW band, just below an Extra Class phone allocation. For example:

5.25 Mhz to 5.35 Mhz CW/Digital
5.35 Mhz to 5.45 Mhz SSB

5.325-5.375 Extra Class Only (25 Khz CW, 25 Khz SSB adjacent)

While this segmentation is different than the legacy allocations currently in use, I believe it offers several major advantages. These are:

1. Clarity of mode segmentation by those most capable and knowledgeable in this small allocation.
2. Wider separation of mode allocations by those less skilled and less likely to possess higher quality equipment.
3. Easier adaptability to mixed mode technologies likely to develop in the next few years and less interference during their development.

In support of Claim in Item 1

A small segment, as proposed can best be utilized by ensuring that the demarcation between modes is kept as clean as possible, especially in this potentially most useful local band segment. Equipment owned by Extra Class operators is more likely to exhibit cleaner transmit quality, be operated properly, and be less susceptible to adjacent signal compromise than that typically employed by entry level stations.

In support of Claim in Item 2

The separation of segments for modes utilized by the lower classes makes them less likely to encounter interference from adjacent mixed mode signals. Since these classes of license typically employ equipment less capable than Extra Class license, the buffer zone of the Extra Class segment will add a degree of functionality that will promote better utilization of this band by all involved.

In support of Claim in Item 3

Digital technology will come to the Amateur Community in the next decade on HF. The existing methods of current digital HF technology, however, leave a lot to be desired when it comes to the existing “hobby” use of the spectrum during non-service activity. There does exist a digital methodology that is compliant with typical amateur operation, however, and while these techniques are not in general use, they could be enhanced by the Amateur Community. One issue will be the availability of a digital channel in close proximity to an analog or spread spectrum segment.

The allocation of this band, as proposed, would make it possible to develop this kind of technology using what should be a relatively clear segment of the band (the CW/Digital Extra Allocation) since it should be free from DX work, and the close proximity to an SSB segment would permit the use of existing transmitters and minimize several technical issues that might otherwise develop.

Keeping DX and weak signal work away from the Extra Class Digital/CW Segment will be essential for this technology to develop.

GENERAL COMMENTS

Amateurs have long needed a band between 75 meters and 40 Meters to compensate for the major propagation differences between these two existing allocations. This is especially important for local and regional activity and again, post 9/11 this allocation makes more sense than ever. After an event, natural or man made, the availability of an allocation in this area would provide needed support for propagation optimization in support of disaster relief operations.

Because many large scale relief efforts, envisioned with the reality of biological or nuclear events in mind, would rely on computers and/or digital communications, this band should protect CW/Digital operation. I include CW as the recognized mode of last resort but the easiest to field in my comments supporting a sub-band because doing so will also enhance the development and deployment of antennas that cover the entire band.

Finally, I suggest that the FCC/ARRL encourage contesting on this band to promote the development of super stations capable of permitting the full benefit of this proposed allocation in time of emergency. As we have been told by other branches of government, 'it is not if but when' we will be dealing with such an event, and no preparation can be too little or too soon in that regard.

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